ABSTRACT

RIBUT WIJAYANING PUTRI. Field Work Practice (PKL) about Virus Detection in Shrimp and Grouper with *Polymerase Chain Reaction* (PCR) Method at Balai Budidaya Air Payau (BBAP) Situbondo, East Java. Academic Advisor is Ir. WAHJU TJAHJANINGSIH, MSi.

Disease is one of principal factor causing heavy losses in aquaculture production. Virus is one of the most dangerous disease agent for culture fish because it can spread very quickly and cause mass mortalities of fishes and shrimps. Virus resist to certain chemical substances or antibiotic because virus particle (virion) in body cells are protected by plasma and cell protein coagulation. The common way to prevent infection is early detection with PCR.

The purpose of this Field Work Practice (PKL) is obtaining knowledges, experiences and skills in field of virology and also to know about the problems in virus identification technic at shrimp and grouper. The activity is held at 28 July until 29 August 2005 in Balai Budidaya Air Payau (BBAP) Situbondo, East Java.

The method used in this Field Work practice (PKL) is the descriptive method with the technic of data taking include the primary and secondary data. It was performed with active participation, observation, interview and study of books.

The method used for virus detection is PCR. PCR is an amplification technic where certain DNA sequences through by three phases i.e extraction of nucleic acid, DNA amplification and elektroforesis. BBAP Situbondo applied PCR IQ 2000™ method in which adopted from Farming IntelliGene Tech. Corp Taiwan. The advantage of this method is able to determine virus attack level (high, normal and light) from examinated sample so it can be suggested action that must be carried out. Until now, virus can be detected are *White Spot Syndrome Virus* (WSSV), *Taura Syndrome Virus* (TSV), *Infectious Hypodermal and Hematopoietic Necrosis Virus* (IHHNV) and *Viral Nervous Necrosis* (VNN).

During August 2005, it has been registered 226 samples of shrimps (post larva, naupli, bean sprouts and the mother), 9.47% of it has been infected WSSV, 8.14% infected TSV and 45.16% infected IHHNV. Whereas, from 22 samples of seafishes (seed and egg), 8.18% of it infected VNN. Most of the samples comes from Banyuwangi and Situbondo, where the area has many of seeding and cultivation centre.